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Citation result

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UI - 94003208
 AU - Waldmann TA
 AU - White JD
 AU - Goldman CK
 AU - Top L
 AU - Grant A
 AU - Bamford R
 AU - Roessler E
 AU - Horak ID
 AU - Zaknoen S
 AU - Kasten-Sportes C
 AU - et al
 TI - The interleukin-2 receptor: a target for monoclonal antibody treatment of human T-cell lymphotropic virus I-induced adult T-cell leukemia.
 LA - Eng
 MH - Adult
 MH - Antibodies, Monoclonal/*therapeutic use
 MH - Antineoplastic Agents, Combined/therapeutic use
 MH - Blotting, Southern
 MH - Female
 MH - Follow-Up Studies
 MH - Gene Rearrangement, T-Lymphocyte
 MH - Human
 MH - HTLV-I/genetics
 MH - Leukemia-Lymphoma, T-Cell, Acute, HTLV-I-Associated/drug therapy/genetics/*immunology/*therapy
 MH - Male
 MH - Middle Age
 MH - Receptors, Interleukin-2/*immunology
 MH - Restriction Mapping
 MH - Virus Integration
 RN - 0 (Antibodies, Monoclonal)
 RN - 0 (Antineoplastic Agents, Combined)
 RN - 0 (Receptors, Interleukin-2)
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 AA - Author
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 AB - Adult T-cell leukemia (ATL) is a malignancy of mature lymphocytes caused by the retrovirus human T-cell lymphotropic virus-I (HTLV-I). It is an aggressive leukemia with an overall mortality rate of 50% within 5 months; no conventional chemotherapy regimen appears successful in inducing long-term disease-free survival in ATL patients. However, ATL cells constitutively express high-affinity interleukin-2 receptors (IL-2Rs) identified by the anti-Tac monoclonal antibody, whereas normal resting cells do not. To exploit this difference in receptor expression, we administered anti-Tac intravenously (IV) to 19 patients with ATL. In general the patients did not suffer untoward reactions, and in 18 of 19 cases did not have a reduction in normal formed elements of the blood. Seven patients developed remissions that were mixed (1 patient), partial (4 patients), or complete (2 patients),

with partial and complete remissions lasting from 9 weeks to more than 3 years as assessed by routine hematologic tests, immunofluorescence analysis, and molecular genetic analysis of T-cell receptor gene rearrangements and of HTLV-I proviral integration. Furthermore, remission was associated with a return to normal serum calcium levels and an improvement of liver function tests. Remission was also associated in some cases with an amelioration of the profound immunodeficiency state that characterizes ATL. Thus the use of a monoclonal antibody that blocks the interaction of IL-2 with its receptor expressed on ATL cells provides a rational approach for treatment of this aggressive malignancy.

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